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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,215	03/02/2004	George E. Sakoske	FER-15313.002:	3941
7609	7590	12/17/2004	EXAMINER	
RANKIN, HILL, PORTER & CLARK, LLP 925 EUCLID AVENUE, SUITE 700 CLEVELAND, OH 44115-1405			PADGETT, MARIANNE L	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/791,215

Applicant(s)

SAKOSKE, GEORGE E.

Examiner

Marianne L. Padgett

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/21/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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1. Applicant's IDS of 6/21/04 is made of record, noting that the patents listed therein were cited in parent case SN 09/941,363.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2 & 8-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heyman et al (4,327,283), in view of Axtell, III et al (6,238,847 B1).

Heyman et al teach making markings by laser ablation on glass substrates of coating 29 or 19 (possibly applied by screen coating), to expose 28 or 18 (ablation portion), where both layers may consist of glass frit and pigment mixtures that are baked or fired to make them permanent after the laser ablation. The marking taught by Heyman et al are bar code makings, and while their content or meaning is not discussed, typical uses therefore are to provide serial number and other manufacturing or marketing information, hence it would have been obvious for one of ordinary skill in the art to use this laser ablation marking technique to provide whatever information desired on the object being marked, especially any information traditionally provided by bar-codes, or on the objection being marked itself, as well as to created any other product identifying markings, such as logos, names, etc., to identify the instant product. In Heyman et al., particularly see the abstract; figures; summary; col. 2, lines 31-51; col. 3, line 37- col. 4, line 43 (for application techniques like screening and appropriate compositions therefore, including pigmented frits or pigmented silicate coatings identified by source not composition

either also employing  $\text{TiO}_2$ ); and col. 5, lines 1-61 for more workpiece (line 39 – glass) and composition suggestions. On col. 3, line 50-55, it is specifically taught to fire the coating after ablation in order to make them an integral part of the workpiece and bridging col. 3-4, that the inorganic silicate integrates with the glass body after suitable heating. While the particular percentages of frit glass and pigments are not disclosed by use of “8 gms #1011 screening paste...”, in col. 4, lines 32-35, the use of  $\text{TiO}_2$  reads on either pigment or metal oxide of the claims, and it would have been obvious to one of ordinary skill in the art to use routine experimentation employing the suggested pigmented frits, to provide composition of suitable consistency for application by screening (i.e. screen printing) on the particular substrate, especially as it is an old and well known technique, as well as to consider analogous compositions used for similar proposes on glass substrates. Note that the claimed “printing medium” may merely read on use of adequate liquid to create a paste of the solid frit and pigment materials.

Further note that in Heyman et al, the underlayer may be considered to read on the claimed second coating of claim 10, and its overcoat the ablation portion, thus clearly prevents any ablation of the substrate or damage thereto. Note if one has 2 distinct layers, each one is a single layer, and the presence of claim 10 is supportive of this concept as applied to claim 1.

While Heyman et al teach the option of laser ablation, they do not specify any particular laser, however it would have been obvious to one of ordinary skill to choose a laser whose wavelength(s) is absorbed by the material to be ablated as is old and well known in the art and based on basic optical principals, thus choice of particular laser (Nd:YAG,  $\text{CO}_2$ , a diode or an excimer laser) would have been determined by routine experimentation and/or knowledge of the

absorptive characteristic of the layer to be ablated. Intensity parameters would then have been determined to produce the desired affect of heating fusing, ablation, etc. Axtell, III et al on col. 8, lines 9-24 lists various lasers as claimed, which may be employed to effect/heat analogous deposited material, thus further motivates the use of types of lasers as claimed.

While Heyman et al teach application of their marking technique to glass, as exemplified by cathode ray-tubes, they do not discuss automotive glass in particular. The suggestion of glass generically, suggests use in other commonly manufactured glass, such as windshields used in automobiles, however who Axtell, III et al also teach glass, specifically suggest that automotive glass (col.3, lines 30, 32-35 & 47-51, specifically 49-50 for automotive glass) be labeled. Axtell also used glass frit material, pigments, metal oxides and various additives (col. 3, lines 54-col. 7, line 30), that may be applied by techniques as taught by Heyman et al., including screen printing, which are marked by laser irradiation (but the marking is saved rather than removed by the laser). It would have been obvious to one of ordinary skill that marking of automotive glass by Heyman et al's technique would have been desirable and effective, as Axtell, III et al supplies motivation to mark such products, supplying another specific type of glass to be marked for the primary reference's generic and specific teachings.

It is noted while Heyman et al (283) does not discuss "crystal seed powder" in the claims, none need be present (zero weight %) and Heyman et al do teach the use of inorganic silicate, where upon heating or firing, the silicates of the coating and body integrate with one another (col. 3, line 68-col. 4, line 3), which is consistent with descriptions of the meaning of crystal seed powder in the parent case and the materials indicated in their specification.

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4. Claims 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heyman et al, in view of Axtell, III et al as applied to claims 8-16 above, and further in view of Boaz (4,477,486).

Heyman et al in view of Axtell, III et al is silent with respect to the shaping, i.e. bending, of glass, as is commonly performed in making automotive windshields as well as where on the window one may wish to coated or mark, however Boaz, who is coating the perimeters of glass automobile windshields with a ceramic containing material, that is heat fused after it is patterned, teaches that the bending operation used in manufacturing windshields can be done after the pattern is applied, and in combination with the fusing operation (abstract; figure; col. 1, lines 33-50; col. 2, lines 15-30; and col. 6, lines 43-52). Boaz teaches the desirability of coating claimed peripheries of windshield (col. 2, lines 11-14) in order to screen from view unsightly construction.

It would have been obvious to one of ordinary skill in the art, that when making an automotive windshield, as is suggested by the Heyman et al plus Axtell. III et al combination, that bending during firing would have been desirable and effective, because Boaz is using analogous fusible material to coat/mark like substrates, with all references teaching firing to fuse after patterning, and Boaz suggests that combining the firing and bending operations, advantageously saves steps, hence time and processing space, etc. Boaz's suggestions of where coatings are desirable would also have provided motivation for where to additionally apply coatings, as reasons given by Boaz would apply generally industry wide for windshields.

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5. Claims 7 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heyman et al in view of Axtell III et al as applied to claims 1-2 and 8-16 above, and further in view of Sakoske (5,783,507).

While Heyman et al and Axtell et al, both have pigmented frit based materials containing silicates for coating their glass substrates and laser treating, they do not employ Bi silicate, Zn silicate or Zn borate therein for what is labeled "crystal seed powder".

Sakoske (570) teach a glass frit based ceramic enamel suitable for silkscreen deposition and taught for use in coating the peripheries of automotive glass. It employs claimed material in ranges significantly overlapping with those claimed, as well as providing discussion of the meaning, use and effect of claimed 'seed material' of zinc silicate or bismuth silicate. See the abstract; col. 1, line 13-30; col. 2 lines 15-55; col. 3, lines 1-65<sup>+</sup>; col. 6, lines 37-50). It would have been obvious to one of ordinary skill in the art to employ frit based composition as taught by Sakoske (507) in the above combination of Heyman et al and Axtell et al, because their formula is consistent with more general teachings of the two reference, and applied in like manner to glass substrates, but additional motivation is supplied by its specific recommendation for the particular end use of automotive glass coating. As it is also fired to fuse it to the substrate and has overlapped compositional characteristic with Heyman et al, would have been expected to have effectively laser treated to effect ablation patterning for processes as taught therein, hence an obvious compositional variation, lacking any unexpected results.

6. Other art of interest for similarly analogous ceramic enamel composition for automotive glass included Sakoske 5,714,420 and 5,677,251, which may be considered equivalent for the purposes of the above rejection.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M L. Padgett whose telephone number is (571) 272-1425. The examiner can normally be reached on Monday-Friday about 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. L. Padgett/af  
November 4, 2004  
December 14, 2004

A handwritten signature in black ink, appearing to read "Marianne Padgett", with a long horizontal flourish extending to the right.

**MARIANNE PADGETT  
PRIMARY EXAMINER**